

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Gunderson / Shell	W	8.1 - 9.4	151.96

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Fireboat / GE / Galvanizers / OFs 16 & 17	W	9.45 - 9.7	14.58

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Goldendale / UPRR	E	9.9 -10.1	6.65

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Outfall 47	E	9.5 -10.0	33.80

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Shipyard / Lagoon	E	7.5 - 9.0	168.52

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Willbridge	W	7.4 - 7.9	32.99

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Willamette Cove	E	6.3 - 6.8	26.74

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Marcom	E	5.5 - 5.8	8.25

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Schnitzer Burgard	E	3.7 - 4.2	31.72

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
OSM/ OF 53A	E	2.0 - 2.7	22.72

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
US Moorings	W	5.95 - 6.1	7.08

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Crawford/ BES	E	5.9 - 6.2	5.03

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
St. Johns West	W	5.65 - 5.9	4.64

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Outfall 48	E	7.1 - 7.2	2.32

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Sultzer	W	10.2 - 10.4	6.30

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
RPAC / Arkema	W	6.3 - 7.5	54.49

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Northwest Natural (Gasco)	W	6.05 - 6.6	23.10

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Time / Premier Edible Oil	E	3.45 - 3.7	6.85

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
S-5 outfall	E	9.25 - 9.3	1.48
Siltronic chlorinated VOCs	W	6.4 - 6.45	0.68

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Triangle Park	E	7.3 - 7.5	12.27

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Downstream PAHs	W	3.1 - 6.9	292.28

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Downstream DDT	W	3.1 - 6.3	90.49

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)
Site-Wide PCB and DDT	Both	2.0 - 11.0	2080.00

Sediment Management Area			
Name	River side	River miles	Approximate Area (acres)

Notes:

Data gaps identified as yes, no, unknown
 Contaminant transport data gaps generally

Footnotes

*(1) Potential upland source area(s)
 *(2) EPA is lead for upland investig

"Stormwater" includes runoff directed to co

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (VOCs [particularly off Area 1], dioxins?, Mn)	yes (behind Texaco dock & behind dock off Area 3)	yes (behind Texaco dock & south end of Area 3)	yes (waiting on TZW sample results off Area 1)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	COI- limited VOC and Mn data L & V Extent- limited samples behind docks, no sub data off James R., evaluating discharge from Outfall 18

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxins?, otherwise, no , sediment samples were analyzed for full PH suite of COI)	yes (pending more thorough review of sediment data)	yes (pending more thorough review of sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no (sediment samples were analyzed for full PH suite of COI)	yes (pending more thorough review of sediment data)	yes (pending more thorough review of sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
*(1)	*(1)	*(1)	*(1)	*(1)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxins?, otherwise, no , sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	yes (surface water transect needed at mouth of SI Lagoon to understand COI transport)	Extent- additional data for hot spot identification & to supplement definition of N&E

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (waiting on TZW sample results)	no (surface water concentrations should be able to be estimated by TZW & sediment concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxins?, otherwise, no , sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface water concentrations should be able to be estimated by TZW & sediment concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (Mn)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	yes	Extent- lateral extent towards the channel, vertical extent towards channel and Cathedral Park Surface Water- to understand source loading

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxins?, PBDE)	yes (largely dependent on 2B cores)	yes (largely dependent on 2B cores)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	COIs- previous PBDE hit, dioxin possibly connected to PCBs

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (Mn)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface water concentrations should be able to be estimated by TZW & sediment concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
*(2)	*(2)	*(2)	*(2)	*(2)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no (sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no (sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (vertical N&E fairly well defined, may need supplemental sediment data)	yes (could be filled by equilibrium partitioning calculations)	no (surface water concentrations should be able to be estimated by TZW & sediment concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no (sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	only City surface data available near outfall

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxins?, otherwise, no , sediment samples were analyzed for full PH suite of COI)	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (waiting on TZW sample results)	yes (currently under investigation)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (waiting on TZW sample results)	yes (currently under investigation)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
*(1)	*(1)	*(1)	*(1)	*(1)	
no	no	no	no	yes (currently under investigation)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
no	yes (lateral N&E fairly well defined, may need supplemental sediment data)	yes (subsurface metals & PAH need further delineation)	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (PAH fingerprinting?)	yes	yes	yes (could be filled by equilibrium partitioning calculations)	no (surface water concentrations should be able to be estimated by TZW & sediment concentrations thru equilibrium partitioning)	attempting to further identify hot spots and local sources of PAHs, define extent into the Willamette River channel and Multnomah channel

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (potential fingerprinting needed to distinguish certain Arkema COIs from RPAC COIs)	yes	yes	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification
yes (dioxin?, PBDE, Mn)	yes	yes	yes (could be filled by equilibrium partitioning calculations)	no (surface wtr concentrations should be able to be estimated by TZW & sed concentrations thru equilibrium partitioning)	extent should look downstream (including Multnomah channel) and upstream

Nature and Extent of Off-Shore Contamination					
COIs	Lateral Extent	Vertical Extent	Transition Zone Water	Surface Water	Justification

or not applicable

y to be addressed by upland facilities

s) not in DEQ's Cleanup Program therefore these potential data gaps should be defined by
 ation therefore these potential data gaps should be identified by EPA/partners team

onveyance systems & overland runoff (i.e., sheetflow)

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (Gunderson upland only) / yes (non-Gunderson property, i.e., potential sources contributing to OF 18)	yes (currently under investigation) (stormwater source control action will likely be required in Areas 2 & 3)	yes (currently under investigation & under source control action)	yes (currently under investigation) (bank source control action will likely be required in Areas 2 & 3)	Source Area- Potential sources contributing to OF18 not yet fully defined	yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes (potential sources contributing to OFs)	yes	no	no	Source Area- Potential sources contributing to OF not yet fully defined)	

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no / no	no (Goldendale) / yes (UPRR)	no / no	unknown		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes (potential sources contributing to OF 47)	yes	no	no	Source Area-Potential sources contributing to OF not yet fully defined)	

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (upland Shipyard) / yes (upland sources to SI Lagoon other than Shipyard)	yes (Shipyard stormwater will be investigated) yes (stormwater sources to SI Lagoon other than Shipyard)	yes (Shipyard GW currently under investigation) yes (upland GW sources to SI Lagoon other than Shipyard)	yes (Shipyard bank soil currently under investigation) yes (bank soil other than Shipyard)	Stormwater- expect significant loading to SI Lagoon via stormwater	yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (N Parcel) yes (S Parcel) yes (upland off-site stormwater sources)	yes (upland off-site stormwater sources & potential S Parcel sources)	no (N parcel) yes (S Parcel)	yes (will need to be evaluated in both N & S Parcels)	Sources & GW- upland RI not complete for South parcel, Stormwater- loading, Bank- sand blast grit present in bank	yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (Schnitzer) yes (upland stormwater sources)	yes (stormwater currently under investigation)	yes (GW currently under investigation)	yes (currently under investigation)	GW & Bank erosion- dependent upon the completion of RI, Stormwater- potential significant migration pathway	yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (OSM) yes (for sites other than OSM)	yes (currently under investigation at OSM) yes (for sites other than OSM)	yes (currently under investigation at OSM) yes (for sites other than OSM)	yes (currently under investigation at OSM) yes (for sites other than OSM)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
*(2)	*(2)	*(2)	*(2)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes	yes	yes	yes	<p>BES Lab- DEQ needs to obtain & review the XPA to determine if any data gaps exist Crawford St- Beach sand removal not totally effective, DEQ needs to re-engage RP</p>	

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no (Marine Finance property) yes (overwater structures)	yes (currently under investigation)	no	no		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes (potential sources contributing to OF 48)	yes	no	n+N11o	Source Area- Potential sources contributing to OF not yet fully defined)	yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	yes (currently under investigation)	yes (currently under investigation)	unknown		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)	yes (currently under investigation)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes (potential sources contributing to OF S5)	yes	no	no		
yes	yes (currently under investigation)	yes (currently under investigation)	no (for Siltronic's HVOC release)		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
no	no	yes (currently under investigation)	no		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
not applicable	not applicable	not applicable	not applicable		yes

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
not applicable	not applicable	not applicable	not applicable		

Data Gaps

Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR
yes	yes	yes	yes	complete upland source ID and link to inwater data	yes

Data Gaps					
Contaminant Source Areas and Transport Pathways					Evaluation
Source Area	Storm-water	Ground-water	Bank Erosion	Justification	MNR

EPA/partners team

of Remedial Action Alternatives		
Treatability Studies	Recontami- nation	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	depositional area

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontami- nation	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	depositional area

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	MNR on fringes

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	MNR on fringes

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontami- nation	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

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Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

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of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification

of Remedial Action Alternatives		
Treatability Studies	Recontamination	Justification
unknown	yes	

of Remedial Action Alternatives		
Treatability Studies	Recontami- nation	Justification